What is claimed is:

1.   A method for identifying a subject as a candidate for a particular clinical course of therapy to treat a vascular disease or disorder comprising the steps of:

    a)   obtaining a nucleic acid sample from the subject;

    b)   determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

    c)   identifying the subject as a candidate for a particular clinical course of therapy based on the identity the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

2.   The method of claim 1, wherein the clinical course of therapy is use of a medical device.

3.   The method of claim 1, wherein the clinical course of therapy is use of a surgical procedure.

4.   The method of claim 2, wherein said medical device is selected from the group consisting of: a defibrillator, a stent, a device used in coronary revascularization, a pacemaker, and any combination thereof.

5.   The method of claim 2, wherein said medical device is used in combination with a modulator of IL1RN gene expression or IL1RN polypeptide activity.

6.   The method of claim 3, wherein said surgical procedure is selected from the group consisting of: percutaneous transluminal coronary angioplasty, laser angioplasty, implantation of a stent, coronary bypass grafting, implantation of a defibrillator, implantation of a pacemaker, and any combination thereof.

7.   A method for identifying a subject who is a candidate for further diagnostic evaluation for a vascular disease or disorder comprising the steps of:

a)   obtaining a nucleic acid sample from the subject;

b)   determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

c)   identifying the subject as a subject who is a candidate for further diagnostic evaluation for a vascular disease or disorder based on the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

8.   The method of claim 7, wherein said further diagnostic evaluation consists of use of one or more vascular imaging devices.

9.   The method of claim 8, wherein said vascular imaging device is selected from the group consisting of: angiography, cardiac ultrasound, coronary angiogram, magnetic resonance imagery, nuclear imaging, CT scan, myocardial perfusion imagery, electrocardiogram, and any combination thereof.

10.   The method of claim 7, wherein further diagnostic evaluation is selected from the group consisting of: genetic analysis, familial health history analysis, lifestyle analysis, exercise stress tests, and any combination thereof.

11.   A method for selecting a clinical course of therapy to treat a subject who is at risk for developing a vascular disease or disorder comprising the steps of:

a)   obtaining a nucleic acid sample from the subject;

b)   determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

c)   selecting a clinical course of therapy for treatment of a subject who is at risk for developing a vascular disease or disorder based on the identity of the

nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

12.   The method of claim 11, wherein the clinical course of therapy comprises use of a medical device for treating a vascular disease or disorder.

13.   The method of claim 12, wherein said medical device is selected from the group consisting of: a defibrillator, a stent, a device used in coronary revascularization, a pacemaker, and any combination thereof.

14.   The method of claim 12, wherein said medical device is used in combination with a modulator of modulators of IL1RN gene expression or IL1RN polypeptide activity.

15.   The method of claim 11, wherein said clinical course of therapy is use of a surgical procedure.

16.   The method of claim 15, wherein said surgical procedure is selected from the group consisting of: percutaneous transluminal coronary angioplasty, laser angioplasty, implantation of a stent, coronary bypass grafting, implantation of a defibrillator, implantation of a pacemaker, and any combination thereof.

17.   A method for determining whether a subject will benefit from implantation of a stent comprising the steps of:

a)   obtaining a nucleic acid sample from the subject;

b)   determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

c)   determining whether a subject will benefit from implantation of a stent based on the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

18. A method for determining whether a subject will benefit from use of a vascular imaging procedure comprising the steps of:

    a) obtaining a nucleic acid sample from the subject;

5   b) determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

    c) determining whether a subject will benefit from use of a vascular imaging procedure based on the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

10   19. The method of claim 18, wherein said vascular imaging procedure is selected from the group consisting of angiography, cardiac ultrasound, coronary angiogram, magnetic resonance imagery, nuclear imaging, CT scan, myocardial perfusion imagery, electrocardiogram, and any combination thereof.

15   20. A method for determining whether a subject will benefit from a surgical procedure comprising the steps of:

    a) obtaining a nucleic acid sample from the subject;

    b) determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

20   c) determining whether a subject will benefit from a surgical procedure based on the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

25   21. The method of claim 20, wherein said surgical procedure is selected from the group consisting of percutaneous transluminal coronary angioplasty, laser angioplasty, implantation of a stent, coronary bypass grafting, implantation of a defibrillator, implantation of a pacemaker, and any combination thereof.

22.   A method for selecting an effective vascular imaging device as a diagnostic tool in a subject comprising the steps of:

a)   obtaining a nucleic acid sample from a subject;

b)   determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof; and

c)   selecting an effective vascular imaging device as a diagnostic tool for said subject based on the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

23.   The method of claim 22, wherein said vascular imaging device is selected from the group consisting of: angiography, cardiac ultrasound, coronary angiogram, magnetic resonance imagery, nuclear imaging, CT scan, myocardial perfusion imagery, electrocardiogram, and any combination thereof.

24.   A computer readable medium for storing instructions for performing a computer implemented method for determining whether or not a subject has a predisposition to a vascular disease or disorder, said instructions comprising the functionality of:

obtaining information from the subject indicative of the presence or absence of the polymorphic region of an IL1RN gene, and

based on the presence or absence of the polymorphic region of an IL1RN gene, determining whether or not the subject has a predisposition to a vascular disease or disorder.

25.   A computer readable medium for storing instructions for performing a computer implemented method for identifying a predisposition to a vascular disease or disorder, said instructions comprising the functionality of:

obtaining information regarding the presence or absence of the polymorphic region of an IL1RN gene, and

based on the presence or absence of the polymorphic region of an IL1RN gene,

identifying a predisposition to a vascular disease or disorder.

26.   An electronic system comprising a processor for determining whether or not a subject has a predisposition to a vascular disease or disorder, said processor implementing

5   the functionality of:

obtaining information from the subject indicative of the presence or absence of the polymorphic region of an IL1RN gene, and

based on the presence or absence of the polymorphic region of an IL1RN gene, determining whether or not the subject has the predisposition to a vascular disease or

10   disorder.

27.   An electronic system comprising a processor for performing a method for identifying a predisposition to a vascular disease or disorder in a subject, said processor implementing the functionality of:

15   obtaining information from the subject indicative of the presence or absence of the polymorphic region of an IL1RN gene, and

based on the presence or absence of the polymorphic region of an IL1RN gene, performing a method for identifying a predisposition to a vascular disease or disorder associated with the polymorphic region.

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28.   The electronic system of claims 26 or 27, wherein said processor further implements the functionality of receiving phenotypic information associated with the subject.

29.   The electronic system of claims 26 or 27, wherein said processor further

25   implements the functionality of acquiring from a network phenotypic information associated with the subject.

30.   A network system for identifying a predisposition to a vascular disease or disorder in response to information submitted by an individual, said system comprising

means for:

receiving data from the individual regarding the presence or absence of the polymorphic region of an IL1RN gene, and

based on the presence or absence of the polymorphic region, determining whether or
5   not the subject has the predisposition to the vascular disease or disorder associated with the polymorphic region.

31.   A network system for identifying whether or not a subject has a predisposition to a vascular disease or disorder, said system comprising means for:
10   receiving information from the subject regarding the polymorphic region of an IL1RN gene,

receiving phenotypic information associated with the subject,

acquiring additional information from the network, and

based on one or more of the phenotypic information, the polymorphic region, and the
15   acquired information, determining whether or not the subject has a pre-disposition to a vascular disease or disorder associated with a polymorphic region of an IL1RN gene.

32.   The system of claims 30 and 31, wherein the network system comprises a server and a work station operatively connected to said server via the network.

20

33.   A method for determining whether a subject has a pre-disposition to a vascular disease or disorder associated with a polymorphic region of an IL1RN gene, said method comprising the steps of:
25   receiving information associated with the polymorphic region of an IL1RN gene,

receiving phenotypic information associated with the subject,

acquiring information from the network corresponding to an IL1RN gene, and

based on one or more of the phenotypic information, the polymorphic region, and the acquired information, determining whether the subject has a pre-disposition to a vascular disease or disorder associated with a polymorphic region of an IL1RN gene.

34.   A method for diagnosing or aiding in the diagnosis of a vascular disease or disorder in a subject comprising the steps of determining the IL1RN genetic profile of the subject, thereby diagnosing or aiding in the diagnosis of a vascular disease or disorder.

35.   The method of claim 34, wherein determining the subject's IL1RN genetic profile comprises determining the identity of the nucleotides present at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof.

36.   The method of claim 34, further comprising utilizing a vascular imaging device to diagnose or aid in the diagnosis of a vascular disease or disorder.

37.   The method of claim 36, wherein the vascular imaging device is selected from the group consisting of: angiography, cardiac ultrasound, coronary angiogram, magnetic resonance imagery, nuclear imaging, CT scan, myocardial perfusion imagery, electrocardiogram, and any combination thereof.

38.   A method for selecting the appropriate drug to administer to a subject who has, or is at risk of developing, a vascular disease or disorder, comprising determining the molecular structure of at least a portion of an IL1RN gene of the subject.

39.   The method of claim 38, wherein determining the molecular structure comprises determining the identities of the allelic variants of at least one polymorphic region of the IL1RN gene of the subject.

40.   The method of claim 38, wherein determining the molecular structure comprises determining the identities of the allelic variants of at least one polymorphic region of the IL1RN gene of the subject.

5   41.   A method for treating a subject having a disease or condition associated with a specific allelic variant of a polymorphic region of an IL1RN gene, comprising the steps of:

(a)   determining the identity of an IL1RN allelic variant; and

(b)   administering to the subject a compound that modulates IL1RN gene expression or protein activity.

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42.   The method of claim 41, wherein the specific allelic variant comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:3, or the complement thereof.

15   43.   A method of diagnosing or aiding in the diagnosis of a vascular disease in a subject comprising the steps of:

(a)   obtaining a nucleic acid sample from the subject; and

(b)   determining the identity of the nucleotides at nucleotide position 8006 of SEQ ID NO:1, or the complement thereof,

20   wherein the presence of one copy of a thymidine allele and one copy of a cytidine allele at position 8006, or the complement thereof, is indicative of increased likelihood of a vascular disease in the subject as compared with a subject having any other combination of these alleles.

25   44.   The method of claim 43, wherein the vascular disease is selected from the group consisting of atherosclerosis, coronary artery disease, myocardial infarction, ischemia, stroke, peripheral vascular diseases, venous thromboembolism and pulmonary embolism.

45.   The method of claim 44, wherein the vascular disease is myocardial

infarction.

46.   The method of claim 44, wherein the vascular disease is coronary artery disease.

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47.   A method for predicting the likelihood that a subject will have a vascular disease, comprising the steps of:

(a)   obtaining a nucleic acid sample from the subject; and

(b)   determining the identity of the nucleotides at nucleotide position 8006

10   of SEQ ID NO:1, or the complement thereof,

wherein the presence of one copy of a thymidine allele and one copy of a cytidine allele at position 8006, or the complement thereof, is indicative of increased likelihood of a vascular disease in the subject as compared with a subject having any other combination of these alleles.

15

48.   The method of claim 47, wherein the vascular disease is selected from the group consisting of atherosclerosis, coronary artery disease, myocardial infarction, ischemia, stroke, peripheral vascular diseases, venous thromboembolism and pulmonary embolism.

20   49.   The method of claim 48, wherein the vascular disease is myocardial infarction.

50.   The method of claim 48, wherein the vascular disease is coronary artery disease.

25

51.   An isolated nucleic acid molecule comprising a nucleotide sequence comprising an allelic variant of a polymorphic region of an IL1RN gene, and allelic variants in linkage disequilibrium therewith, or the complement thereof, wherein the allelic variant differs from the reference sequence set forth in SEQ ID NO:1, and wherein the allelic variant

is associated with vascular disease.

52.   A kit comprising probes or primers which are capable of hybridizing to the nucleic acid molecule of one of claim 51.

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53.   The kit of claim 52, wherein the probes or primers comprise a nucleotide sequence from about 15 to about 30 nucleotides.

54.   The kit of claim 53, wherein the probes or primers are labeled.

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55.   A method for determining the identity of one or more allelic variants of a polymorphic region of an IL1RN gene in a nucleic acid obtained from a subject, comprising contacting a sample nucleic acid from the subject with probes or primers having sequences which are complementary to an IL1RN, wherein the sample comprises an IL1RN gene

15   sequence, thereby determining the identity of one or more of the allelic variants.

56.   The method of claim 55, wherein the probes or primers are capable of hybridizing to an allelic variant of a polymorphic region, and wherein the allelic variant differs from the reference sequence set forth in SEQ ID NO:1.

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57.   The method of claim 55, wherein determining the identity of the allelic variant comprises determining the identity of at least one nucleotide of the polymorphic region of an IL1RN gene.

25   58.   The method of claim 55, wherein determining the identity of the allelic variant consists of determining the nucleotide content of the polymorphic region.

59.   The method of claim 55, wherein determining the nucleotide content comprises sequencing the nucleotide sequence.

60.   The method of claim 55, wherein determining the identity of the allelic variant comprises performing a restriction enzyme site analysis.

61.   The method of claim 55, wherein determining the identity of the allelic variant is carried out by single-stranded conformation polymorphism.

62.   The method of claim 55, wherein determining the identity of the allelic variant is carried out by allele specific hybridization.

63.   The method of claim 55, wherein determining the identity of the allelic variant is carried out by primer specific extension.

64.   The method of claim 55, wherein determining the identity of the allelic variant is carried out by an oligonucleotide ligation assay.

65.   The method of claim 55, wherein the probe or primer comprises a nucleotide sequence from about 15 to about 30 nucleotides.

66.   An Internet-based method for assessing a subject's risk for vascular disease, the method comprising:

    a)   analyzing biological information from a subject indicative of the presence or absence of a polymorphic region of IL1RN;

    b)   providing results of the analysis to the subject via the Internet, wherein the presence of a polymorphic region of IL1RN indicates an increased risk for vascular disease.

67.   A method of assessing a subject's risk for vascular disease, the method comprising:

a)   obtaining biological information from the individual;

b)   analyzing the information to obtain the subject's IL1RN genetic

profile;

c)   representing the IL1RN genetic profile information as digital genetic

5   profile data;

d)   electronically processing the IL1RN digital genetic profile data to

generate a risk assessment report for vascular disease, wherein the presence of a polymorphic

region of IL1RN indicates an increased risk for vascular disease; and

e)   displaying the risk assessment report on an output device.

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68.   A method of assessing a subject's risk for vascular disease, the method

comprising:

a)   obtaining the subject's IL1RN genetic profile information as digital

genetic profile data;

15   b)   electronically processing the IL1RN digital genetic profile data to

generate a risk assessment report for vascular disease, wherein the presence of a polymorphic

region of IL1RN indicates an increased risk for vascular disease; and

c)   displaying the risk assessment report on an output device.

20   69.   The method of claims 67 or 68, further comprising the step of using the risk

assessment report to provide medical advice.

70.   The method of claims 67 or 68, wherein additional health information is

provided.

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71.   The method of claim 70, wherein the additional health information comprises

information regarding one or more of age, sex, ethnic origin, diet, sibling health, parental

health, clinical symptoms, personal health history, blood test data, weight, and alcohol use,

drug use, nicotine use, and blood pressure.

72.   The method of claim 68, wherein the IL1RN digital genetic profile data are transmitted via a communications network to a medical information system for processing.

5   73.   The method of claim 72, wherein the communications network is the Internet.

74.   A medical information system for assessing a subject's risk for vascular disease comprising:

    a)   means for obtaining biological information from the individual to obtain an IL1RN genetic profile;

    b)   means for representing the IL1RN genetic profile as digital molecular data;

    c)   means for electronically processing the IL1RN digital genetic profile to generate a risk assessment report for vascular disease; and

    d)   means for displaying the risk assessment report on an output device, wherein the presence of a polymorphic region of IL1RN indicates an increased risk for vascular disease.

75.   A medical information system for assessing a subject's risk for vascular disease comprising:

    a)   means for representing the subject's IL1RN genetic profile data as digital molecular data;

    b)   means for electronically processing the IL1RN digital genetic profile to generate a risk assessment report for vascular disease; and

    c)   means for displaying the risk assessment report on an output device, wherein the presence of a polymorphic region of IL1RN indicates an increased risk for vascular disease.

76.   A computerized method of providing medical advice to a subject comprising:

a)   analyzing biological information from a subject to determine the subject's IL1RN genetic profile;

b)   based on the subject's IL1RN genetic profile, determining the subject's risk for vascular disease;

5   c)   based on the subject's risk for vascular disease, electronically providing medical advice to the subject.

77.   A computerized method of providing medical advice to a subject comprising:

a)   based on the subject's IL1RN genetic profile, determining the

10   subject's risk for vascular disease;

b)   based on the subject's risk for vascular disease, electronically providing medical advice to the subject.

78.   The method of claims 76 or 77, wherein the medical advice comprises one or

15   more of the group consisting of further diagnostic evaluation, administration of medication, or lifestyle change.

79.   The method of claims 76 or 77, wherein additional health information is obtained from the subject.

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80.   The method of claim 79, wherein the additional health information comprises information regarding one or more of age, sex, ethnic origin, diet, sibling health, parental health, clinical symptoms, personal health history, blood test data, weight, and alcohol use, drug use, nicotine use, and blood pressure.

25

81.   A method for self-assessing risk for a vascular disease comprising

a)   providing biological information for genetic analysis;

b)   accessing an electronic output device displaying results of the genetic analysis, thereby self-assessing risk for a vascular disease, wherein the presence of a

polymorphic region of IL1RN indicates an increased risk for vascular disease.

82.   A method for self-assessing risk for a vascular disease comprising accessing an electronic output device displaying results of a genetic analysis of a biological sample, wherein the presence of a polymorphic region of IL1RN indicates an increased risk for vascular disease, thereby self-assessing risk for a vascular disease.

83.   A method of self-assessing risk for vascular disease, the method comprising
    a)   providing biological information;
    b)   accessing IL1RN digital genetic profile data obtained from the biological information, the IL1RN digital genetic profile data being displayed via an output device, wherein the presence of a polymorphic region of IL1RN indicates an increased risk for vascular disease.

84.   A method of self-assessing risk for vascular disease, the method comprising accessing IL1RN digital genetic profile data obtained from biological information, the IL1RN digital genetic profile data being displayed via an output device, wherein the presence of a polymorphic region of IL1RN indicates an increased risk for vascular disease.

85.   The method of claims 82 or 84, wherein the electronic output device is accessed via the Internet.

86.   The method of claims 82 or 84, wherein additional health information is provided.

87.   The method of claim 86, wherein the additional health information comprises information regarding one or more of age, sex, ethnic origin, diet, sibling health, parental health, clinical symptoms, personal health history, blood test data, weight, and alcohol use, drug use, nicotine use, and blood pressure.

88.   The method of any of claims 81, 82, 83, or 84, wherein the biological information is obtained from a sample from an individual at a laboratory company.

5   89.   The method of claim 88, wherein the laboratory company processes the biological sample to obtain IL1RN genetic profile data, represents at least some of the IL1RN genetic profile data as digital genetic profile data, and transmits the IL1RN digital genetic profile data via a communications network to a medical information system for processing.

10   90.   The method of any of claims 81, 82, 83, or 84, wherein the biological information is obtained from a sample from an individual at a draw station, wherein the draw station processes the biological sample to obtain IL1RN genetic profile data, and transfers the data to a laboratory company.

15   91.   The method of claim 90, wherein the laboratory company represents at least some of the IL1RN genetic profile data as digital genetic profile data, and transmits the IL1RN digital genetic profile data via a communications network to a medical information system for processing.

20   92.   A method for a health care provider to generate a personal health assessment report for an individual, the method comprising counseling the individual to provide a biological sample; authorizing a draw station to take a biological sample from the individual and transmit molecular information from the sample to a laboratory company, wherein the molecular information comprises the presence or absence of a polymorphic region of IL1RN; 25   requesting the laboratory company to provide digital molecular data corresponding to the molecular information to a medical information system to electronically process the digital molecular data and digital health data obtained from the individual to generate a health assessment report; receiving the health assessment report from the medical information

system; and providing the health assessment report to the individual.

93.   A method for a health care provider to generate a personal health assessment report for an individual, the method comprising requesting a laboratory company to provide digital molecular data corresponding to the molecular information derived from a biological sample from the individual to a medical information system to electronically process the digital molecular data and digital health data obtained to generate a health assessment report; receiving the health assessment report from the medical information system; and providing the health assessment report to the individual.

94.   A method of assessing the health of an individual, the method comprising: obtaining health information from the individual using an input device; representing at least some of the health information as digital health data; obtaining biological information from the individual, wherein the information comprises the presence or absence of a polymorphic region of IL1RN; representing at least some of the information as digital molecular data; electronically processing the digital molecular data and digital health data to generate a health assessment report; and displaying the health assessment report on an output device.

95.   The method of claim 94, wherein electronically processing the digital molecular data and digital health data to generate a health assessment report comprises using the digital molecular data and digital health data as inputs for an algorithm or a rule-based system that determines whether the individual is at risk for a specific disorder.

96.   The method of claim 94, wherein the individual has or is at risk of developing vascular disease, and wherein electronically processing the digital molecular data and digital health data to generate a health assessment report comprises using the digital molecular data and digital health data as inputs for an algorithm or a rule-based system that determines the individual's prognosis.

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97.   The method of claim 94, wherein electronically processing the digital molecular data and digital health data comprises using the digital molecular data and digital health data as inputs for an algorithm or a rule-based system based on one or more databases comprising stored digital molecular data and/or digital health data relating to one or more

5   disorders.

98.   The method of claim 94, wherein electronically processing the digital molecular data and digital health data comprises using the digital molecular data and digital health data as inputs for an algorithm or a rule-based system based on one or more databases

10   comprising (i) stored digital molecular data and/or digital health data from a plurality of healthy individuals, and (ii) stored digital molecular data and/or digital health data from one or more pluralities of unhealthy individuals, each plurality of individuals having a specific disorder.

15   99.   The method of either of claims 97 or 98, wherein at least one of the databases is a public database.

100.   The method of claim 94, wherein the digital health data and digital molecular data are transmitted via a communications network to a medical information system for

20   processing.

101.   The method of claim 100, wherein the communications network is the Internet.

25   102.   The method of claim 100, wherein the input device is a keyboard, touch screen, hand-held device, telephone, wireless input device, or interactive page on a website.

103.   The method of claim 94, wherein the health assessment report comprises a digital molecular profile of the individual.

104.   The method of claim 94, wherein the health assessment report comprises a digital health profile of the individual.

5   105.   The method of claim 94, wherein the molecular data comprises nucleic acid sequence data, and the molecular profile comprises a genetic profile.

106.   The method of claim 94, wherein the molecular data comprises protein sequence data, and the molecular profile comprises a proteomic profile.

10   107.   The method of claim 94, wherein the molecular data comprises information regarding one or more of the absence, presence, or level, of one or more specific proteins, polypeptides, chemicals, cells, organisms, or compounds in the individual's biological sample.

15   108.   The method of claim 94, wherein the health information comprises information relating to one or more of age, sex, ethnic origin, diet, sibling health, parental health, clinical symptoms, personal health history, blood test data, weight, and alcohol use, drug use, nicotine use, and blood pressure.

20   109.   The method of claim 94, wherein the health information comprises current and historical health information.

110.   The method of claim 94, further comprising obtaining a second set of
25 biological information at a time after obtaining the first set of biological information; processing the second set of biological information to obtain a second set of information; representing at least some of the second set of information as digital second molecular data; and processing the molecular data and second molecular data to generate a health assessment report.

111.   The method of claim 110, further comprising obtaining second health information at a time after obtaining the health information; representing at least some of the second health information as digital second health data and processing the molecular data, health data, second molecular data, and second health data to generate a health assessment report.

112.   The method of claim 94, wherein the health assessment report provides information about the individual's predisposition for vascular disease and options for risk reduction.

113.   The method of claim 112, wherein the options for risk reduction comprise one or more of diet, exercise, one or more vitamins, one or more drugs, cessation of nicotine use, and cessation of alcohol use.

114.   The method of claim 94, wherein the health assessment report provides information about treatment options for a particular disorder.

115.   The method of claim 114, wherein the treatment options comprise one or more of diet, one or more drugs, physical therapy, and surgery.

116.   The method of claim 94, wherein the health assessment report provides information about the efficacy of a particular treatment regimen and options for therapy adjustment.

117.   The method of claim 94, further comprising storing the molecular data.

118.   The method of claim 117, further comprising building a database of stored molecular data from a plurality of individuals.

119.   The method of claim 94, further comprising storing the molecular data and health data.

5   120.   The method of claim 119, further comprising building a database of stored molecular data and health data from a plurality of individuals.

121.   The method of claim 119, further comprising building a database of stored digital molecular data and/or digital health data from a plurality of healthy individuals, and

10   stored digital molecular data and/or digital health data from one or more pluralities of unhealthy individuals, each plurality of individuals having a specific disorder.

122.   The method of claim 121, further comprising building a database of stored molecular data and health data from a plurality of individuals.

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123.   The method of claim 121, further comprising building a database of stored digital molecular data and/or digital health data from a plurality of healthy individuals, and stored digital molecular data and/or digital health data from one or more pluralities of unhealthy individuals, each plurality of individuals having a specific disorder.

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